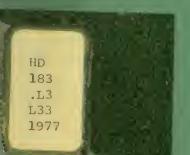# ADP MANAGEMENT PLAN
Fiscal Years 1978 Through 1983

Compiled by the Division of Data Processing
Denver Service Center

December, 1977

U.S. Department of the Interior
Bureau of Land Management
Denver, Colorado

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

December 21, 1977

Information Memorandum No. 77- 285
Expires 9/30/78

To: All WO and Field Officials

From: Director

Subject: ADP Management Plan

Automatic Data Processing (ADP) has become an essential program element
for all facets of Bureau operation. The need for more effective computer
system management has been recognized as a high priority item. To insure
an integrated approach, an ADP Management Plan is developed annually in
the Departmentally prescribed format. This plan provides a general frame-
work of both current and future operations. It is intended to provide a
common understanding of the characteristics and objectives of the BLM ADP
program.

It is suggested that the widest possible distribution of the Fiscal
Year 1978 ADP Management Plan be made. This will maximize its use as a
reference document as well as a source of insight into the plans and
accomplishments of Bureau ADP personnel. This procedure should prove a
valuable asset in providing a link between all levels of those involved
in computer use and those providing the services.

George L. Turcott

Acting Director

1 Enclosure
    Encl. 1 - Bureau of Land Management ADP Management Plan, FY 78

BUREAU OF LAND MANAGEMENT
ADP MANAGEMENT PLAN

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I. EXECUTIVE SUMMARY

A. Introduction

The Federal Land Policy and Management Act of 1976 was designed to "establish public land policy; to establish guidelines for its administration and to provide for the management, protection, development, and enhancement of the public lands." Accomplishment of the mission defined by the Act involves significant implications in the area of data processing for the Bureau of Land Management. The traditional role of a "record keeper" has been greatly expanded by this Act which requires creating and maintaining an inventory of all public lands and their resource value. More important, however, is BLM's charter to take positive action on multiple land-use planning. This will include the need for a more sophisticated information systems capability at all levels of management and across a wide spectrum of program areas.

To meet the information needs inherent in BLM's new direction, as well as to increase the effectiveness in meeting the objectives of its continuing mission, a "Strategic Plan for Information Systems Management" has been developed.

The Strategic Plan is guided and progress is monitored by a Steering Committee which also serves as the Executive ADP Review Board. Field participation is insured through a permanent Field Committee which reviews plans, recommends actions, and keeps each of the State Office organizations informed about the progress and actions taken and planned.

Implementing the Plan has been given top priority with nearly all available developmental ADP skills being assigned to this effort. An ADP contact point has been identified in each State Office for technical-level coordination and liaison in implementing the Bureau goals. The contacts will also provide excellent feedback on progress, problems, and recommendations.

The Plan's thrust is to provide a guide for managing the Bureau's information systems aimed at increasing effectiveness in collecting, assimilating, and using the vast amounts of information required in making analyses, assessments, policies, and decisions relating to public land administration.

The Plan provides a basis for more informed decisions about (1) information system requirements, (2) management of data, (3) use of remote sensing technology in data collection, and (4) acquisition of ADP hardware and software. The Plan maximizes participation of the end user through direct involvement in identifying what they require the systems provide to them, what data elements are needed, and what format presentation of data is most usable. The Strategic Plan is a multi-year approach to the systems management situation. It provides basic building blocks from foundation to total structure. Each module or block is analyzed separately and in relation to other blocks to properly address the entire Bureau operational requirements.

This approach is designed to satisfy user needs, and to eliminate overlaps, inefficiencies, and major gaps in information management which has caused fragmentation of systems and poor utilization of scarce ADP resources on occasions in the past.

I. EXECUTIVE SUMMARY

B. Policy and Priority Changes in the Past Year

"The Federal Land Policy and Management Act of 1976" placed added impetus and pressure to develop automated capabilities as quickly as possible to conform to the demands of the law. The Act has not caused policy changes in the direction of systems development, but greatly increases the requirement priority. The provisions in the Act for mining claim recordation, resource inventories, and planning have been incorporated into the Strategic Plan at the appropriate points and are being developed accordingly.

One of the Bureau's most important policies is to provide the end user with computer support at his fingertips and under his control. This can be done many ways. For example, the computing support can be located centrally and accessed via terminals, or a computer of some size may be located at field installations. The magnitude of data elements being identified by the end users, the volume of data identified for collection, and the new legal requirement to maintain natural resource inventories have helped shape this policy. Pertinent considerations are:

1. The Bureau systems and automated processes required in all field-oriented organizations are essentially the same. Few unique requirements exist. The opportunity for standardization and the resulting benefits are a reality. This, coupled with extreme manpower constraints, eliminates consideration of multiple ADP organizations with the Bureau and the inevitable systems fragmentation. Therefore, all standard systems and processes are to be developed in one Bureau organizational entity and made available to all users except where approved by management in unusual circumstances.

2. The data used in field locations is rarely used outside the geographical boundaries of the responsible organizational unit. If it is used outside those boundaries, it is further consolidated, summarized or aggregated. This fact, coupled with the identified data volumes, requires access to computer support at all user locations and computer equipment at locations which can handle the volume of processes most economically. At this time some State Offices appear to be the best location for possible computer equipment. This may vary with the activity in each State. Therefore, the size of field equipment required will depend upon the data analysis resulting from field-level review of the Detailed Requirements Definition (DRD) effort.

3. The accuracy, integrity, and validity of data is the highest when the end user is responsible for the above items. Therefore, with the proper automated processes and access to computing equipment, the end user can apply these tools directly to the individual situation or problem. This requires some skill in system knowledge, data knowledge, and equipment operating knowledge, but not the normal computer programming or systems analysis skills generally associated with ADP.

4. Costs must be minimized wherever possible. The DRD effort identified the use of computer graphics as the highest probable use of geographic resource information. This requirement demands high volumes of data to be processed and passed from computer storage to the graphic terminals. To avoid high data transmission costs, the most economical use of data circuits must be used. The Bureau policy, therefore, is to provide end users with:

　　　a. Computing tools which allow them to access integrated, horizontal, multiple-use data, and eliminate fragmented systems.

　　　b. Standard computer processes allowing functional specialists to use them without becoming ADP specialists.

　　　c. Computer support at their disposal so they may apply the standard processes to their individual situation.

　　　d. Standards and guidelines to assist in their assuming responsibility for the data bases which they use to insure data integrity, accuracy, and responsiveness.

　　　e. Economical methods which meet their requirements.

I. EXECTUVIE SUMMARY

C. Goals

1. ADP Management Goals

a. Assist the Bureau's resource and administrative functions in defining and developing information systems requirements with the broad conceptual framework of the Strategic Plan.

b. Install and convert all existing BLM application systems to the Honeywell 66/80 computer for Bureauwide systems, and field-level computers, where appropriate, to process geographically oriented data bases. The Bureau mission, which has been codified and expanded upon through passage of the Federal Land Policy and Management Act, entails the administration of multiple-use management, protection, development, and enhancement of the public lands and their resources. To facilitate reaching agency goals and objectives requires that equipment and related software be acquired to (1) provide automated support for mission areas at all levels of BLM, emphasizing support for the field organization, (2) provide dynamic flexibility to integrate changes in response to demand, and (3) be in consonance with anticipated supporting fund and manpower resource levels.

c. Develop standard processing capabilities which are common and available to all users.

d. Develop a Systems User Guide which will document user standards, programmer standards, procedures, responsibilities, etc., that pertain to the ADP function.

e. Identify for top management any problems which may adversely affect ADP's ability to support the Bureau's mission early enough to allow adequate lead time to solve those problems.

f. Maintain adequate professional competency in the central and field ADP staffs by appropriate recruiting, assignments, and training.

g. Acquire personnel with skills required to support the long range program goals of the Bureau through proper recruitment or contract.

h. Develop, update, and complete BLM Manual Section 1260 to reflect current policies, standards, procedures, and utilization practices.

i. Expand equipment, software, and telecommunications capabilities to meet full Strategic Plan implementation needs in support of program goals.

j. Establish and maintain ADP liaison individuals in each State Office. The following areas are examples of those which will involve the State Office coordinators:

(1) Planning, liaison, and trouble shooting.

(2) Identification of data traffic to/from the State, District, and Area Offices.

(3) Identification of terminals to meet that traffic, their number, locations, and date of installation.

(4) Coordination between systems builders and systems users on needs, programming delivery dates, installation priorities, etc.

(5) Day-by-day usage of the computer.

(6) Usage charges and how they relate to fiscal year funding.

(7) Training needs.

(8) Documentation needs.

k. Provide technical ADP support and advice to the Field Committee and the Information Systems Management Steering Committee.

l. Maintain close working relationships with the Office of ADP and Telecommunications Management and other bureaus and agencies for mutual edification and cooperation.

m. Application system implementation plan development and execution.

n. Coding, digitizing, and other data entry testing.

o. Conceptual system structure definition, refinement, and design.

p. Develop all appropriate standards and procedures.

q. Acquire appropriate field level support.

2. **Information Systems Management Goals**

Achieve the specific support activities below and monitor progress through a project control system.

a. Detailed Requirements Definition for Resource Inventory and URA.

b. User Requirements Specifications for Resource Inventory and URA.

c. Implementation Plan.

d. Trial Project.

e. Detailed Requirements Definition for Land and Survey Records.

f. Training for Information Systems Implementation.

3. **Remote Sensing Goals**

a. Integrate into BLM Information Systems Management, to the extent determined feasible through testing, a remote sensing system to support the inventory requirement in the Federal Land Policy and Management Act of 1976.

b. Develop, to a prescribed level of detail, a sampling system to be used with remote sensing to satisfy the vegetative resource disciplines.

c. Provide BLM personnel training in remote sensing using digital data processing.

d. Optimize methods for determining change detection.

I. EXECUTIVE SUMMARY

D. FY-77 Accomplishments
Strategic Plan for Information Systems Management

1. **Began structuring user requirements:** The first segment of the program included the definition of detailed requirements for the Resource Inventory and Unit Resource Analysis application packages. This phase was also started later in FY-77 for the Land and Survey Record package. The effort started with the preparation of documentation to support the system requirements as defined by user teams (over 200 participants). This documentation is currently receiving field user validation and included the following steps culminating in the development of documentation for the systems design segment:

a. Train DRD teams in the use of the Hierarchy Input-Process-Output (HIPO) technique. Data Base Branch was responsible for this action, including preparation of training material.

b. Presentations to the Field Committee on the concepts of data base management and functional responsibilities of the Data Base Branch.

c. Provide guidance to each DRD team in preparation of the DRD documentation requirements.

d. Provide guidance for implementation of DRD in the Data Element Dictionary.

e. Provide the guidance and participate in conflict resolution of data elements.

2. **Application System Verification Test (ASVT). Wildland Vegetation Resource Inventory Remote Sensing Project:** This program will test and evaluate the feasibility of using advanced ADP technology for the analysis of LANDSAT data for performing resource inventories of public lands. BLM, NASA, and EROS are participating jointly in this program. An RFP was prepared by BLM and announced by NASA in January 1977 for contractor support for the first year of the program. The contractor will provide image analysis and development of sampling and data reduction techniques. Four proposals were received from contractors and evaluated. A contract was awarded to Electromagnetic Systems Laboratories (ESL) in the summer of 1977.

Specifications have been prepared and an RFP issued for the procurement of an Image Analysis system in FY-78. This will be an interactive system based on a special purpose machine which is interfaced to the BLM general purpose computer. It will contain an interactive color display with hardcopy output products such as photographs, plots or printed pages.

3. **Auto-Surveyor:** BLM procured an Auto-Surveyor (A/S) in FY-76 after it was determined, through tests conducted by SSD, that this surveying device possessed performance characteristics which were compatible with the BLM surveying accuracy requirements. The A/S is an inertial navigation system which has been adapted for conducting land surveys. As an integral component, the system contains a digital computer which converts accelerations measured by the inertial measurement unit into changes in geodetic coordinates. It performs all other computations necessary to determine the current position of the system (latitude, longitude, and elevation) and to perform traverse adjustments (smoothing). This system has proven to be an excellent tool for conducting cadastral surveys in Alaska. Two projects were used to explore further applications of the A/S in the lower-48 States in FY-77. One project, a dependent resurvey, was conducted near Cima, California, while the second project was a photogrammetry control survey accomplished near Cuba, New Mexico.

An additional A/S was recently purchased for delivery on May 1, 1977, for the Alaska State Office. It is anticipated that both of these systems will be utilized in Alaska during the summer months and in the lower-48 during the winter months.

4. **Zeiss Reg Elta-14 Tachometer:** SSD is providing software support for the Division of Cadastral Surveys during the test and evaluation of three Reg Elta-14 surveying systems. These systems combine the capabilities of an electronic theodolite and an electronic distance measuring device. A small special purpose Zeiss Eltac computer is attached to the Reg Elta-14 for automatic data reduction for some applications. It receives data from the survey system and provides both digital displays and punched paper tape outputs.

5. **Computer Site Facility:** Renovation of the Service Center site in Building 53 for the new Honeywell computer is 90 percent complete. Some portions did not meet the specifications and are still under negotiation, but the site is ready for the equipment. The work on the computer site facility was done under a contract let by GSA. This space will be the best that BLM has had for equipment of this type with provisions for security, fire protection, and vastly improved environmental amenities for operating personnel. Computer site and facility for the ASVT equipment has been acquired and prepared in the Simms Street Building, Denver.

6. **Computer Procurements:**   BLM issued a large-scale computer procurement Request for Proposal (RFP) in May 1976. Proposals were received from interested vendors. An award was not made on schedule due to the filing of a protest with the General Accounting Office (GAO) and the General Services Administration (GSA) by a vendor. The GSA judged that BLM had justifications for its actions and the procurement proceedings restarted with a broadcast inviting new vendor participation. The Comptroller General upheld BLM in all points of the protest action and procurement action began afresh. BLM lost eight months and thousands of dollars because of the protest. The effort was further delayed by the Survey and Investigations Staff of the House Appropriations Committee. After four and one-half months the Committee lifted the freeze and an award was made October 20, 1977, to lease a Honeywell 66/80 model computer.

7. **Special Evaluation of the DSC Division of Data Processing:**   A special evaluation of the Service Center ADP Division was conducted by an evaluation team made up of Washington Office, State Office, and Service Center personnel. The team prepared a report of findings and recommendations. These were submitted to the Service Center Director by the Associate Director for development of a plan of action. Some items in the plan have been implemented and others are being prepared for implementation.

8. **Fiscal Year Accomplishments in the State Offices:**   FY-76 reflected a significant ADP growth within the States. Some of the more prominent areas of activity are:

a. The Alaska Automated Land Records System is now fully operational. Enhancements scheduled for FY-77 included provisions for on-line file maintenance in batch mode and an accelerated development of graphic output capability. BLM had entered into a GSA negotiated contract to provide upgraded computer services through the First National Bank of Anchorage, Alaska.

b. Some State and OCS Offices, the WO, and the BIFC are using computer systems from other government agencies and commerical sources to assist them in their day-to-day work. Most of these systems are being accessed by remote terminals, both remote job entry and interactively. Some 20 computers at a cost of $1.4 million annually outside BLM are being used for Bureau work.

The work being done on the outside computer systems ranges from simple sorting to complex calculations. The complex problem solving includes modeling, simulation, and data base development.

c. Some State and OCS Offices, the WO, and the BIFC have participated in such Bureau projects as word processing study; the design and development of OCS Master Title Plat (MTP) Record System; OCS Post-Sale Analysis program package; developed contracts for computing various models—Seas, Harris, and Davis for OCS ES's; the acquisition of WANG 2200 system, which includes digitizer, plotter, and disk storage to be used for the Outer Continental Shelf Survey program; and the implementation of Public Law 94-565, "Payments in Lieu of Taxes" (PILT) at the Washington Computer Center. The State Offices use many of the in-house systems such as Range Management, Fire Danger Rating System EXIR, etc.

I. EXECUTIVE SUMMARY

E. Key Management Decisions—Required/Made
Major Procurements

1. The award to the Honeywell Corporation for their Model 66/80 computer system to replace the presently installed Burroughs B-5500 was completed October 20, 1977. Subsequent decisions will be required to exercise RFP options to augment the initial installation.

2. A decision was made to acquire Bureau graphic and digitizing systems for the California Desert Program and the Trial Project. The same equipment is projected for Oregon during the first quarter of FY-78.

3. Decisions will be made on the equipment required to accomplish the data gathering necessary to meet other activities that are scheduled in the Strategic Plan, primarily graphics terminals and digitizing, or scanning. Remote sensing equipment decisions have been made.

4. The first phase of a telecommunications study was completed with some of the recommendations having been implemented. A second phase study is scheduled to begin in FY-78. Decisions will be made to design a Bureauwide data communications network including the appropriate lines, modems, multiplexors, and terminals.

5. The cost analysis concerning image analysis processing associated with the ASVT program was prepared by SSD in accordance with OMB Circular A-76. A final decision was made to acquire the ASVT equipment under a lease-purchase agreement. Departmental approval was obtained and supported by the House Appropriations Committee.

6. Acquisition of field computing equipment, based on user requirements, was decided as Bureau policy. Capability is first scheduled for Oregon about September, 1978.

Staffing

1. The Division of Data Processing has identified a need for new positions. For FY-78, 24 new positions were identified and 14 were approved—12 for Data Processing Division (DSC) (of which three will be functional specialists), one for the Oregon State Office and one for the WO. The positions approved for the Service Center will be used for implementing the Strategic Plan in all of its aspects, the installation of new equipment, and development in the area of decentralized processing.

2. The staffing impact upon State and District Offices will be based upon equipment sizing and the extent to which standard processes can be provided to them. More intelligence concerning this will be available after the field review, analysis, and conceptual design have been completed.

Organization

A reorganization of the Denver Service Center is currently before the Department for review. The ADP function may be significantly affected by decisions made as a result of the review. At present, most of the ADP staff is located centrally within an increasing number of State Offices hiring ADP skilled people. The key management decision involves the placement of field computing power.

Some of the elements which are being considered are: location, size, procurement of equipment; compatibility with central equipment located at the Service Center; the amount of data and information any decentralized equipment will process, store and maintain; staffing; cost effectiveness; and location of the data security function and its procedures and guidelines.

Budgeting

1. ADP activity is now a subactivity component (line item) in the budget. This will necessitate new methods of accounting and preparing Annual Work Plans for ADP use throughout BLM.

2. Significant increases in travel for DSC, State and local offices are required for FY-78 and subsequent years in order to implement the Strategic Plan and to procure equipment for the Service Center and field locations.

Operational Policies and Procedures

1. The procedures for implementation of the Strategic Plan have been established, but will be reviewed on a continuing basis as project development advances by the Information Systems Management Steering Committee and the Field Committee.

2. Central site operational policies are established but may require some modification after installation of the new computer.

3. Operational policies for remote terminals and satellite computer systems will be established for the State Offices.

4. Operating standards are being developed for a wide range of subjects from data gathering to data security.

5. Interim procedures were established in WO Instruction Memorandum 76-513 for review and clearances required for obtaining equipment, services, or software.

Training

1. The training in connection with the new computer will be provided by the Honeywell Corporation. Further decisions will be required on:

    a. Continuing training both for ADP and for field personnel.

    b. Scheduling and conducting training for the users.

    c. Funding training necessary to maintain a high level of technical competence in ADP and user locations after the initial vendor-applied training has been completed.

2. Training in remote sensing consisting of two basic courses in photo interpretation and one course in advanced computer assisted interpretation will be given each year of the ASVT Project.

Other Decisions

The decisions listed below have been made in the past year and will continue to be influential factors in ADP development, utilization, and reporting.

1. The Information Systems Management Steering Committee has been restructured and the duties and responsibilities have been redefined. The net effect is that this committee will serve in an advisory capacity to the Directorate on all Information Systems policy and will function as the Executive ADP Review Board.

2. A Deputy Assistant Director, Technical Services, was established in the Washington Office with responsibility for implementing the Strategic Plan. A Project Manager for the Strategic Plan and a staff assistant to the ADP Coordinator were added to the Staff of the Deputy.

3. The Federal Land Policy and Management Act of 1976 will have significant implications toward heavier use of ADP technology and greater emphasis upon Strategic Plan implementation.

4. A working group of ADP contact points has been established with a representative from each State to coordinate various ADP functional activities.

5. A field committee composed of all Associate State Directors was established to review progress and provide recommendations on program direction from a field user perspective on the Strategic Plan.

6. An Information Systems Coordinator position was established in the Service Center to coordinate all interdivisional activities required for Strategic Plan implementation.

7. A study of BLM needs in the area of word processing has been completed. This study did not include text processing or text editing.

8. Three new positions in the SSD Division were identified and filled for exclusive work on the Remote Sensing Project.

9. A year's training at Purdue's Laboratory for Remote Sensing (LARS) has been approved and recruiting is to be completed for admission in mid-year term.

10. A Memorandum of Understanding between BLM/USGS has been signed to provide for one man-year of services from EROS Data Center.

11. A conceptual system structure project was initiated to prepare a framework for all future system design functions. Via this framework BLM will guide the development of each architectural segment to be used in the initial project phase.

12. A Trial Project was started to design, develop, and test automated processes to support digitizing, encoding, and display of products using land records and geo-referencing data on a trial basis. Specific areas of technological problems, conceptual problems, and other areas affecting system design components will be thoroughly examined, investigated, and tested toward determining the most effective operation technology.

13. Specific technical studies will be made in FY-78 to determine design approaches for appropriately distributing the data base processing.

14. A management decision was made to identify a specific budget subactivity as Data Management. As such it includes ADP, telecommunications, remote sensing, and the Strategic Plan. Data Management is a decision package under Zero Base Budgeting and is identified as a discrete program in the four-year appropriation authorization request under the Federal Land Policy and Management Act of 1976.

15. A five-year cooperative agreement has been executed between DOI (BLM, USGS, FWS) and DOA (FS) for cooperative testing of some concepts, requirements, and capabilities involved in implementing the BLM's Strategic Plan.

I. EXECUTIVE SUMMARY

F. Financial Summary ($000)

OBLIGATIONS AND INVENTORY OF ADP SYSTEMS
OMB A-11, Exhibit 43A

	FY-77	FY-78	FY-79
1. Capital Investment			
A. Purchase of new capacity (new starts)	619	487	766
B. Purchases to expand or replace existing capacity	0	0	0
C. Purchase of software or other equipment	215	340	635
D. Site	24	100	100
Subtotal	858	927	1501
2. Personnel			
A. Compensations, benefits, and travel	3301	3910	4336
B. Work Years	(112)	(124)	(137)
Subtotal	3301	3910	4336
3. Equipment, rental, space, and other operating costs			
A. ADPE rentals	61	1343	1438
B. Space	194	268	268
C. Supplies and other	188	123	155
Subtotal	443	1734	1861
4. Commercial Services			
A. ADPE time	62	55	55
B. Operations	51	50	50
C. Systems analysis and programming	270	205	300
D. ADPE maintenance	247	303	303
E. ADP studies and other	0	20	30
Subtotal	630	633	738

	FY-77	FY-78	FY-79
5. Interagency Service			
A. Payments	300	158	160
B. Offsetting Collections	0	0	0
Subtotal	300	158	160
6. Intra-agency Services			
A. Payments	211	479	490
B. Offsetting Collections	0	0	0
Subtotal	211	479	490
7. Other Services			
A. Payments	90	55	55
B. Offsetting Collections	0	0	0
Subtotal	90	55	55
8. Number of ADP Systems and CPUs			
A. General Management Systems			
1. Owned CPUs	1	1	2
2. Leased CPUs	0	2	2
B. Special Management Systems			
1. Owned CPUs	0	0	0
2. Leased CPUs		1	1
TOTALS			
Total obligations (less agency sharing)	5232	7204	8436
Agency sharing net	601	692	705
Work-years	(112)	(124)	(137)
Systems	2	2	2
CPUs	1	4	5

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OBLIGATIONS FOR TELECOMMUNICATIONS SYSTEMS

	FY-77	FY-78	FY-79
1. **Capital investments ($000)**			
A. Hardware			
1. Voice	0	0	0
2. Data	97	137	175
B. Site	40	150	200
C. All other	17	24	34
Subtotal	154	311	409
2. **Personnel**			
A. Compensation, benefits & travel ($000)	150	200	300
B. Work-years	(3)	(4)	(6)
Subtotal	150	200	300
3. **Equipment: lease space and other operating costs ($000)**			
A. Lease of telecommunications equipment			
1. Voice	2137	2778	3611
2. Data	35	170	290
B. Space	60	78	95
C. Supplies and other	3	10	30
Subtotal	2235	3036	4026
4. **Commercial services ($000)**			
A. Leased multi-point telecommunications network services			
1. Voice	6	17	29
2. Data	0	0	0
B. Leased switched telecommunications services			
1. Voice	11	22	22
2. Data	0	0	0
C. Leased point-to-point telecommunications services			
1. Voice	233	226	216
2. Data	0	0	0
D. Systems engineering services	0	100	100
E. Studies	0	0	0
F. All other	30	30	30
Subtotal	280	395	397

OBLIGATIONS FOR TELECOMMUNICATIONS SYSTEMS (continued)

	FY-77	FY-78	FY-79
5. Interagency services ($000)			
A. Payments			
1. Voice	0	0	0
2. Data	6	10	12
B. Offsetting collections			
1. Voice	0	0	0
2. Data	0	0	0
Subtotal	6	10	12
6. Intra-agency services ($000)			
A. Payments			
1. Voice	1105	1436	1867
2. Data	21	21	10
B. Offsetting collections			
1. Voice	0	0	0
2. Data	0	0	0
Subtotal	1126	1457	1877
7. Other services ($000)			
A. Payments	0	0	0
B. Offsetting collections	0	0	0
Subtotal	0	0	0
TOTALS			
Total obligations (less interagency/ intra-agency/other services) ($000)	2819	3942	5132
Interagency/intra-agency/other services	1132	1467	1889
Work-years	(3)	(4)	(6)

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BLM REMOTE SENSING RESOURCE REQUIREMENTS BY PROJECT YEAR

	FY-77 BLM (000)	FY-78 BLM (000)	FY-79 BLM (000)	FY-80 BLM (000)
Personnel	180	180	180	180
Travel	40	35	35	35
Contractor Support	0	0	0	0
Equipment* and Facilities	60	60	30	20
Supplies	10	10	10	10
Training	45	45	45	10
Aircraft Photography	20	20	20	20
Computer Time	0	30	50	50
Data Products	0	0	0	25
Lease-Purchase	100	155	155	210
Research and Development	0	0	0	50
Total Resources	455	535	525	610

*Small Incidental Equipment

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II. OPERATIONS SUMMARY

A. Organization Profile

1. Mission and Functions

The BLM manages over 450 million acres of Federal land surface, and is responsible for realty activities on all of the Public Domain, the Outer Continental Shelf, and large areas of Federal land under the surface management of other agencies.

Bureau program activities include: domestic livestock grazing, fish and wildlife ecology and habitat development, outdoor recreation, timber management, watershed protection, wilderness preservation, minerals development, adjudication of mineral lease applications, environmental protection, river basin planning, construction and maintenance of roads and trails, protection of public land and resources, maintenance of basic land ownership records, public land surveys (cadastral) and the granting of rights-of-way easement.

2. Anticipated Organization Changes Affecting the ADP Management Plan

The role of the Information Systems Management Steering Committee, the Project Manager, the Information Systems Coordinator, and the establishment of the ADP technical contacts are the major organizational and assignment changes which affect this plan. Further organizational changes are proposed to accommodate the evolutionary nature of Bureauwide information system management requirements.

The sizing of equipment configurations and process capabilities in the field units may dictate the need for a six-to-ten member staff at each location for the whole data management area. There is limited programming or computer analysis staff contemplated in these units since standard systems will be used where possible; however, subject matter analysts who have a working knowledge of automated techniques will be required.

3. Major Mission Areas and Leadership Roles Affecting the ADP Management Plan

a. **Assistant Director, Technical Services.** The Assistant Director, Technical Services, provides leadership and direction for a wide variety of technical and operational support functions including ADP, remote sensing, and telecommunications. He is assisted by a Deputy Assistant Director and Division Chiefs, or Coordinators, for each of the above program areas. As Chairman of the Information Systems Management Steering Committee, he is responsible for Strategic Plan implementation. Most of the Technical Services program areas utilize ADP support to a limited extent but have a demonstrated need for much greater assistance.

b. **Information Systems Steering Committee.** The Information Systems Steering Committee was established with the responsibility of guiding information systems development work in the Bureau. Much of the early work of the Committee dealt with the joint BLM/Contractor study of information systems needs then in progress. At present, the Committee reviews proposals for information systems development, remote sensing, and data processing technology and equipment.

Their primary function is to serve as advisor to the Directorate on policy matters and as the link between the Field Committee, the Assistant Directors, and the Washington Office Division Chiefs.

The membership of the Steering Committee is as follows:

Area	Representative
Assistant Director, Legislation and Plans	Robert Jones
Assistant Director, Resources	George Lea
Assistant Director, Technical Services	Jesse Lowe
Assistant Director, Administration	Paul Vetterick
Assistant Director, Minerals Management	John Davis
Field Committee	Jesse Lowe

The Committee Chairman is Jesse Lowe. The Vice-Chairman is George Lea. Marvin LeNoue serves as Executive Secretary.

c. **Assistant Director, Resources.** The Assistant Director, Resources, is responsible for developing and implementing natural resource policy for the national resource lands. The creation of automated support for his resource inventory system and other resource-oriented application packages will make this area of responsibility a major user of automated systems capability.

d. **Assistant Director, Administration.** The Assistant Director, Administration, provides leadership and direction to administrative management and management support activities of the Bureau. This area is currently the largest single consumer of automated support capability.

e. **Assistant Director, Legislation and Plans.** The Assistant Director, Legislation and Plans, provides leadership and direction to the Bureau for operation of the planning portion of the Bureau's planning/programming/budgeting system; coordination of environmental policy and procedures; and insuring their incorporation into Bureau systems. All data automation is designed to eventually support the plans resulting from this system.

f. **Assistant Director, Minerals Management.** The Assistant Director, Minerals Management, is responsible for developing and implementing coordinated minerals policy, programs, standards, and technology on the national resource lands, L.U. lands, acquired lands, private lands with minerals reserved to the Federal Government, and on the Outer Continental Shelf. Many automated systems already support this area and many of those implemented under the Strategic Plan will provide direct support also.

g. **Detached Bureauwide Offices.** The Bureau has two detached offices which have Bureauwide responsibilities for developing and improving standards and technology for assigned activities. Additionally, they provide certain administrative support and operational services for the Bureau.

(1) **Service Center.** The Service Center provides specialized support to the Washington Office and technical assistance to the States in the areas of Bureauwide data processing, financial operations service, management analysis, personnel services, procurement, and property management services. The Division of Data Processing is responsible Bureauwide for the full range of ADP activities toward enhancing and facilitating administrative and technical programs through the use of automated processes and related systems techniques. The Office of Scientific Systems Development is responsible for the development of an operational remote sensing system, with capabilities for inventorying and monitoring certain natural resources on the public lands.

(2) **Boise Interagency Fire Center.** Located at Boise, Idaho, this Center is responsible for developing and improving standards and technology for the fire protection activity, fire trespass, certain operational fire presuppression and suppression activities including assistance in conducting fire control. Automated support is provided by the central site in Lakewood, Colorado, and by a special purpose warehouse inventory system at the Fire Center. All design and programming support services are from the Service Center.

h. **Basic Field Organization.** The Bureau's land and resource management programs are conducted through State Offices and District Offices in the 11 Western States and Alaska, and through OCS Offices on the Atlantic, Gulf, Pacific, and Alaskan coasts. Implementation of the Strategic Plan will provide on-line access to a large scale computer for all those offices.

 (1) **State Offices.** These offices, headed by State Directors, are the Bureau's primary line management operational offices. Each administers specified geographical areas consisting of one or more States. They provide or obtain from the Service Center, adequate technical service to guide and support field operations.

 (2) **District Offices.** District Offices develop and carry out resource management work programs in the field. Each office has responsibility for a portion of the geographical area under the jurisdiction of the State Office. The offices perform resource inventories and analyses, and prepare plans and program proposals. They protect the resources from fire, insects, disease, unauthorized use, and other environmental damage. They conduct development activities to prevent the decline of, or to increase productivity of, resources on the public lands and they supervise all authorized uses. In some instances, geographically separated Resource Area Headquarters have been established within a District to provide improved resource management and public service. These employees represent BLM's front-line troops.

 (3) **Regional Representatives.** Bureau Regional Representatives are key field officials who are designated by the Director. In addition to their regular duties, Regional Representatives are responsible for strengthening interagency assistance and improving interagency and intergovernmental coordination within the Federal Regions. They are responsible for establishing and maintaining communications with the Secretary's Field Special Assistants and for representing Bureau regional interests on Departmental Field Committees.

 (4) **Outer Continental Shelf Offices.** Located at New Orleans, Los Angeles, Anchorage, and in the New York City metropolitan area, these offices perform some or all of the functions related to the OCS minerals program. They are currently participating in a test of ADP capabilities which tie all OCS Offices into a common system to support the Master Title Plat program.

III. MANAGEMENT RESOURCES

A. Manpower

 1. **Manpower Issues Which Impact ADP's Ability to Support Mission Requirements:** An important manpower issue will be allocation of the existing positions for the tasks required to support the Strategic Plan. The limited availability of additional positions within BLM will result in heavy reliance on contractor support for the initial development effort. New skills in telecommunications, data base management, and graphics will be the first priority for any new positions. Equally important will be the restatement of subject-matter functional priorities at a time when severe and increasing workload demands are being levied. The increased reliance on active participation by field activities toward identifying and developing new information systems will require such priority changes.

Contract man-months can be utilized to partially close the gap between man-months available against those required. The emphasis would then shift priority work to preparing Statements of Work, contract monitoring and detailed standards for systems design, programming, and documentation. Since substantial contract support is to be utilized, time will be used to plan the most productive areas and the way to oversee the contractors.

2. **ADP Manpower Summary.** The following FY-78 positions under "ADP Definition" exists in the Bureau:

Service Center	97
Oregon State Office	6
Alaska State Office	19
Washington Office	2
	124

3. **Training Plans and Staff Enhancements.** Basically, it can be seen that personnel needing ADP education and training can be classified into three groups:

a. Bureau personnel directly concerned with ADP, including equipment operators, programmers, systems analysts, engineers, mathematicians, and other technically oriented computer users.

b. Supervisors and employees responsible for gathering, classifying, and submitting data to the computer, and employees who use the output.

c. Administrators and managers using the computer results in decision-making or data analyses.

In order to develop and implement a training program to satisfy the above groups, the following steps will be taken:

(1) Conduct training needs analysis to determine Bureauwide training objectives.

(2) Design generalized training curriculum.

(3) Tailor individual education plans.

(4) Select training methods.

(5) Design training evaluation procedures.

(6) Conduct training programs.

(7) Evaluate training results.

Training courses and skills required for the new computer installation and use will be primarily acquired with the equipment from the vendor.

III. MANAGEMENT RESOURCES

B. Equipment and Facilities

1. Factors Influencing Overall ADP Equipment Planning.

a. The majority of mission-oriented data is gathered at BLM District and State Office organization levels. This data is also used primarily at those levels, and very little of it, from a volume standpoint, is used elsewhere in the Bureau. Administrative and management data, on the other hand, is gathered at all field levels and processed centrally with feedback to field management and also headquarters level. The data originating location of each user, the volume of data movement, and the response time required will be the determining factors in equipment configuration and location planning.

b. The Strategic Plan will require newer state-of-the-art capabilities than are available in the Bureau.

c. The formalizing of BLM's data base management philosophy cannot occur with the present equipment. The mass amount of data associated with some of our more recently automated systems—Range, Cadastral Survey Field Notes, Bentonite Claims—can now be efficiently maintained or referenced using current data storage and data manipulation capabilities. These large data handling and storage requirements added to

the annual increases in data bases of our more established systems (personnel, financial management, material sales, etc.), plus Bureau plans for more emphasis on automated support of resource inventories, are going to require a data base/data management system that is supportable by the current ADP configuration.

d. The decision to decentralize some ADP capabilities to the field cannot be managed with the present configuration.

e. The State and District Offices need ADP equipment to assist them in their daily work environment. The equipment ranges from computer terminals to stand-alone computer systems. Some of the equipment needed by the State Offices will be used to directly support the Strategic Plan, but current capability is needed now to facilitate such things as mining claims, environmental statements, resource inventory, fire control, etc.

2. **Impact of Projected Growth of Requirements on Equipment and Facilities.** Projected growth is based on Strategic Plan requirements and on existing demand for ADP service within BLM. The impact of growth requirements upon ADP was the subject of a 1974 contract which resulted in the current necessity to change equipment and ADP philosophy discussed elsewhere in this report. The Bureau is making a major step forward in facing the actualities of information demand and is beginning to plan for the orderly implementation of equipment, procedures, and policy.

III. MANAGEMENT RESOURCES

C. Telecommunications

1. Proposed Capability

Within the next four to six years, every Bureau office location will be connected into a telecommunication network. The kind of network (a Departmental network, a Bureau network, etc.), and its development by fiscal year are not known in any detail at this time. As the Strategic Plan is implemented, this information will be documented.

2. Proposed Equipment and Circuit Considerations are:

a. The Strategic Long Range Plan.

b. State Office responses to a recent survey conducted by the Division of Data Processing.

c. Existing equipment.

d. Known immediate needs.

e. Anticipated short range needs.

f. A desire for a methodical and systematical implementation of an efficient communication network.

g. The assumption that all States and Districts will not grow at the same rate.

III. MANAGEMENT RESOURCES

D. Remote Sensing

1. Equipment and Facilities

Although remote sensing will play an increasingly important role in the inventory and monitoring of natural resources, there will be no requirement to place the equipment in every State Office immediately. Once Scientific Systems Development has demonstrated the capability of the various levels of flight and different sensors, decisions can be made to design systems for satisfying the requirements of each State.

Alaska, due to its remoteness, its inaccessibility, and its large need for broad basic inventories, should be considered as the first possible site for remote sensing equipment divorced from the Service Center. Other States will be supported by the Service Center and contract services until such time as they demonstrate their need for the equipment. At that time we shall consider the possibility of satisfying two or more States with one system or by the addition of peripheral equipment to Bureau Information Systems equipment.

2. Personnel

The present project, ASVT, is being handled by the following specialists:

    a. A project leader, a physicist, who has a background in designing sensors.

    b. A biological scientist with a specialty in remote sensing.

    c. A statistician.

    d. A training specialist.

This group is being supported during the life of the demonstration project by personnel from the States and Districts where the test sites are located, as well as private contractors funded by NASA. At the end of the demonstration phase (1980) the project will become an operational program if feasible and should be self-sufficient if three resource specialist-range conservationists, forester and geologist, and an analyst/systems operator are added.

3. Training

During the three years of test and demonstration, an accelerated training program supported by EROS Data Center will be in effect. At the end of the project, regular training sessions will be continued, with special training in basic or advanced remote sensing given at the request of any State Office.

III. MANAGEMENT RESOURCES

E. Software

1. **Planned for Acquisition and Development Outside Current RFP 6-21 Requirements**
   a. REX (Data Base Query System).
   b. Burro (Tape conversion program).
   c. Conversion program to convert B-5500 COBOL to COBOL 74.
   d. General Utility Program.
   e. Terminal Utility Program for systems not owned by the Bureau.

2. **Existing**

SOFTWARE DESCRIPTION	V/I	P/L	ANNUAL COST
1. CMC Model 1930 RPGII: a report generator program	V	L	1272
2. CMC Model 1939 OAMT: operator analysis program to produce various use statistics	V	L	636
3. CMC 1940 Media Conversion Format: reformatter program	V	L	636
4. Utility programs developed in-house and used on the B-5500	——	——	——
5. Burroughs utility library available on the B-5500	——	——	——
6. USLA BMD Series of scientific and statistical programs available on the B-5500	——	——	——
7. Tektronics software modified to fit the IBM System 7 and the CYBER 70	——	——	——

III. MANAGEMENT RESOURCES

F. Contracts (FY-78)

1. Contracts planned where ADP services or software are expected to be the primary or only deliverable item.

General Electric Co.	GE Mark III Timeshare Computer Services for Fire Planning	$20,000
GSA	Computer Specialist help for the Plans and Standards Staff	NTE $97,000

2. Contracts in which ADP represents over 50 percent of total contract or over $5,000 and Government sharing arrangements.

Computer Science Corp.— INFONET	OCS Master Title Plat System— Desert Study Plan	NTE $ 15,000
Bureau of Mines	Blanket purchase agreement for Xerox Computer Forms Printer Service & Microfilming	NTE $ 5,000
Bureau of Mines	Payroll Processing	$ 85,000
Bureau of Reclamation	Contract for computer services for EXIR, software, Scientific Systems, Fire Control, Coal Leasing, Minerals, Comprehensive Resource Inventory System, etc.	NTE $216,000
U.S. Forest Service	Contract for computer services as needed on Univac 1108. Used mainly for engineering applications. Location is Ft. Collins	NTE $ 12,000
Gretchen's Keypunch, Inc.	Contract for keypunch support for Fire Statistics, Forest Inventory, Cadastral Applications, through GSA/SBA	NTE $ 6,000
State of Oregon and Lane County	Contract for interactive graphics support for Resource Information System	NTE $ 50,000
University of Oregon	Digitizing and programming	$ 40,000
J&J Keypunch Anchorage, Alaska	Keypunch support	$ 2,400
Keypunch Services of Anchorage	Keypunch support	$ 2,400
Alaska Microfiche, Ltd.	Microfilming for ANCSA reports	$ 1,500
Alaska Data Systems	Rental of computer services in OCS office	$ 1,500
Bank of Anchorage	General applications support	$300,000

Bonneville Power Administration	Process data via their system and cost structure	$ 25,000
Through GSA	FTS Access Lines with WE-113A modems Lakeview, Prineville, Burns, Boise	$ 21,000
IBM	Keypunch material rental	$ 9,000
NOAA	Baseline Studies	$540,000
National CSS	Economic Analysis	NTE $ 15,000
IBM	Consultant help on the Strategic Plan	NTE $ 98,500
NASA	ASVT	$400,000
USDA	OCS Post Sale Analysis	$ 2,000
UCLA	OCS Post Sale Analysis	$ 500
Army	OCS Post Sale Analysis	$ 1,000
FHWA	O&C Road Design	$ 30,000

IV. BLM COMPUTER OPERATIONS

A. Operational Computer Applications

Over a period of about 15 years, the following computer systems have been implemented:

Financial Management System
(Includes eleven subsystems which provide financial and mission management information.)

Manpower/Personnel System

Public Domain Forest Inventory System

Range Management System

OCS Post Sale Analysis System

Material Sales System

Socio-Economic Data System

Dynamic Regional Analysis Model (DYRAM)

Fire Planning System

Lease Management System

Cadastral Survey Field Notes System

Fire Reporting System

Motor Vehicle System

Property Management System

Procurement Information System

Fire Warehouse Stores Inventory System

Comprehensive Resource Inventory System

Alaska Automated Land Records System

Mineral Lease Data System

Watershed Conservation and Development System

Road Records System

Communication Site Appraisal Data System

Direct Entry Fire Reporting System

Archaeological Inventory System (New Mexico and Montana)

Seed Bid Analysis System

Tree Planting Bid Analysis System

OCS Boundary Computation System

In addition to the above, many generalized analytical programs are used throughout the Bureau for statistical and economic analysis and data retrieval. Two major studies were completed in FY-77:

Word Processing Study

Interactive Computer Graphics Study

IV. BLM COMPUTER OPERATIONS

B. Applications under Development

Project Monitor Plan

Review of Strategic Plan Progress

Land Records—Trial Project

Data Collections—Trial Project

Resource Inventory/URA System Design

Case & Utilization Management—DRD

Socio-Economic—DRD

Standards & Documentation

Renewable Resource Training Program (Phase I)

Training Plan for Technical and User Personnel of Strategic Plan

EXIR Enforcements

System Documentation

Mineral Lease Data System

Mineral Economics

Wilderness Intrusion Analysis

FM Information System

IV. BLM COMPUTER OPERATIONS

C. Future Applications Development

The Strategic Plan for Information Systems Management, completed in FY-76, will provide a conceptual and priority framework for future development of data processing applications. Application packages described in the plan are:

Resource Inventory

Land and Survey Records Management

Utilization Management

Case Management

Planning—Unit Resource Analysis

Planning—Management Framework Plan

EAR/EIS Preparation and Publication

Program Planning

Regional Analysis

AWP and Program Management

Administrative Management (Property, Personnel, Accounting and Fund Control, Payroll)

In addition to the above priorities, BLM demands are expected to intensify for use of computers for impact modeling, word processing, bibliographic retrieval, computer graphics, and visitor data analysis.

APPENDIX 1

EXISTING EQUIPMENT

INSTALLED ADP EQUIPMENT LISTING

WASH DC

EQUIPMENT TYPE   MFR TYPE-MODEL SER NO.   LOCATION * * *   OWNER   INSTALLED   QTY PUR-PRICE   MO-RENTAL   DESCRIP-CHAR-CIRCUIT NO

TERMINAL	CCI	4C	154	WASH OFFICE	OWNED	08/75	1	$ 4400	$ 0	MINERALS
TERMINAL	TEX	735	4712	WASH OFFICE	OWNED	08/75	1	$ 2595	$ 0	MINERALS
TERMINAL	TEX	742	23934	WASH OFFICE	OWNED	08/75	1	$ 4950	$ 0	MINERALS

STATE TOTAL   PURCHASE AMT: $11945   LEASE AMT: $0   # TERMINALS: 3   # MODEMS: 0

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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INSTALLED ADP EQUIPMENT LISTING

PAGE 1   2

ALASKA

EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	OWNER	INSTALLED	LOCATION	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
TELETYPE	TEL	28 ASR		LEASE		FLDLOC 18 UNITS	18	$ 0	$ 0	FIRE, CANT COM W-COMPUTR
TERMINAL	BEE	CRT III	RCA12543	LEASE	10/75	STATE OFFICE	1	$ 4195	$ 175	WAREHOUSE & LAND STATUS
TERMINAL	BEE	CRT III	RCA12545	LEASE	10/75	STATE OFFICE	1	$ 4195	$ 175	WAREHOUSE & LAND STATUS
TERMINAL	BEE	CRT III	RCA12549	LEASE	10/75	STATE OFFICE	1	$ 4195	$ 175	WAREHOUSE & LAND STATUS
TERMINAL	BEE	CRT III	RCA12551	LEASE	10/75	STATE OFFICE	1	$ 4195	$ 175	WAREHOUSE & LAND STATUS
TERMINAL	BEE	CRT III	PCA12791	LEASE	10/75	STATE OFFICE	1	$ 4195	$ 175	WAREHOUSE & LAND STATUS
TERMINAL	BEE	CRT III	RCA12889	LEASE	05/76	STATE OFFICE	1	$ 4195	$ 175	WAREHOUSE & LAND STATUS
TERMINAL	BEE	CRT III	RCA12973	LEASE	05/76	STATE OFFICE	1	$ 4195	$ 175	WAREHOUSE & LAND STATUS
TERMINAL	BEE	CRT III	PCA12975	LEASE	05/76	STATE OFFICE	1	$ 4195	$ 175	WAREHOUSE & LAND STATUS
TERMINAL	BEE	CRT III	RCA12981	LEASE	10/75	STATE OFFICE	1	$ 4195	$ 175	WAREHOUSE & LAND STATUS
TERMINAL	BEE	CRT III	RCA35976	LEASE	08/77	STATE OFFICE	1	$ 4195	$ 175	WAREHOUSE & LAND STATUS
CALCOMP PLOTTR	CAL	PLOT 713	2341	OWNED	06/73	STATE OFFICE	1	$ 56179	$ 0	
CALCOMP TAPUNT	CAL	TAPE 925	2112	OWNED	08/74	STATE OFFICE	1	$ 29679	$ 0	
TERMINET-300	GFL	TERM 300	24033	LEASE		STATE OFFICE	1	$ 0	$ 210	AFFIRMS
C26 KPUNCH	IBM	026 822	J0787	OWNED	06/75	STATE OFFICE	1	$ 4200	$ 0	
MODEM	ICC	MODEM201	RCA12544	LEASE	10/75	STATE OFFICE	1	$ 2500	$ 63	WAREHOUSE & LAND STATUS
MODEM	ICC	MODEM201	RCA12546	LEASE	10/75	STATE OFFICE	1	$ 2500	$ 63	WAREHOUSE & LAND STATUS
MODEM	ICC	MODEM201	RCA12548	LEASE	10/75	STATE OFFICE	1	$ 2500	$ 63	WAREHOUSE & LAND STATUS
MODEM	ICC	MODEM201	PCA12552	LEASE	10/75	STATE OFFICE	1	$ 2500	$ 63	WAREHOUSE & LAND STATUS
MODEM	ICC	MODEM201	RCA12778	LEASE	10/75	STATE OFFICE	1	$ 2500	$ 63	WAREHOUSE & LAND STATUS
MODEM	ICC	MODEM201	RCA24035	LEASE	10/75	STATE OFFICE	1	$ 2500	$ 63	WAREHOUSE & LAND STATUS
MODEM	ICC	MODEM201	RCA24044	LEASE	10/75	STATE OFFICE	1	$ 2500	$ 63	WAREHOUSE & LAND STATUS
MODEM	ICC	MODEM201	RCA24046	LEASE	10/75	STATE OFFICE	1	$ 2500	$ 63	WAREHOUSE & LAND STATUS
MODEM	ICC	MODEM201	RCA24969	LEASE	08/77	STATE OFFICE	1	$ 2500	$ 63	WAREHOUSE & LAND STATUS
TEKTRONIC PRNT	TEK	PRNT4651	*193420	OWNED	09/76	STATE OFFICE	1	$ 3795	$ 0	2777 VN
DATA INTERFACE	TEK	I-F CPT1	BJ10558	OWNED	09/76	STATE OFFICE	1	$ 3175	$ 0	2777 VN
GRAPHICS SYS	TEK	GRAPH 22	B025529	OWNED	05/76	STATE OFFICE	1	$ 12240	$ 0	2777 VN
TERMINAL	TTY	PRNTR640	RCA12772	LEASE	10/75	STATE OFFICE	1	$ 2500	$ 90	WAREHOUSE & LAND STATUS
TERMINAL	TTY	PRNTR640	RCA12773	LEASE	10/75	STATE OFFICE	1	$ 2500	$ 90	WAREHOUSE & LAND STATUS
TERMINAL	TTY	PRNTP040	RCA12774	LEASE	10/75	STATE OFFICE	1	$ 2500	$ 90	WAREHOUSE & LAND STATUS
TERMINAL	TTY	PRNTR040	RCA12834	LEASE	10/75	STATE OFFICE	1	$ 2500	$ 90	WAREHOUSE & LAND STATUS
TERMINAL	TTY	PRNTR040	RCA12885	LEASE	10/75	STATE OFFICE	1	$ 2500	$ 90	WAREHOUSE & LAND STATUS
TERMINAL	TTY	PRNTR040	RCA24030	LEASE	05/76	STATE OFFICE	1	$ 2500	$ 90	WAREHOUSE & LAND STATUS
TERMINAL	TTY	PRNTR040	RCA24060	LEASE	05/76	STATE OFFICE	1	$ 2500	$ 90	WAREHOUSE & LAND STATUS
TERMINAL	TTY	PRNTR040	RCA26112	LEASE	05/76	STATE OFFICE	1	$ 2500	$ 90	WAREHOUSE & LAND STATUS
TERMINAL	TTY	PRNTR040	RCA24970	LEASE	08/77	STATE OFFICE	1	$ 2500	$ 90	WAREHOUSE & LAND STATUS
TERMINAL	IBM	129	57020	LEASE	09/72	ANCHORAGE	1	$ 6125	$ 150	
TERMINAL	IBM	129	57041	LEASE	09/72	ANCHORAGE	1	$ 6125	$ 150	
TERMINAL	IBM	129	85262	LEASE	10/74	ANCHORAGE	1	$ 6125	$ 153	
TERMINAL	IBM	129	97849	LEASE	11/74	ANCHORAGE	1	$ 6125	$ 178	
SCAN DIGITIZER	SPT	SOS 138	144	OWNED	10/76	ANCHORAGE	1	$ 40818	$ 0	
TERMINAL	TEK	CRT4051	193329	OWNED	05/76	ANCHORAGE	1	$ 16273	$ 0	2777 VN
PRT TERMINAL	TEX	TI-745		LEASE	02/77	ANCHORAGE	1	$ 0	$ 0	OASIS

STATE TOTAL   PURCHASE AMT: $166379   LEASE AMT: $3968   # TERMINALS: 22   # MODEMS: 9

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INSTALLED ADP EQUIPMENT LISTING

ARIZONA   PAGE   1   3

EQUIPMENT TYPE	MFR TYPE-MODEL	SER NO.	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
			LOCATION * * *					
TTY	TTI 33 ASR	589072	STATE OFFICE	LEASE 01/76	1	$ 0	$ 75	951-4201
					# TERMINALS: 1			# MODEMS: 0

STATE TOTAL	PURCHASE AMT:	$0	LEASE AMT:	$75

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CALIF   PAGE   1

EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION * * *	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
TERMINAL	TEL	33 ASR	168419	STATE OFFICE	OWNED	09/68	1	$ 1300	$ 0	AFFIRMS
DATA CONVERTR	TEL	33 DATA	13453-A	STATE OFFICE	LEASE		1	$ 0	$ 0	AFFIRMS
TERMINAL	TEX	733 ASR	32107	RIVERSIDE	LEASE	01/76	1	$ 2595	$ 145	DESERT STUDY

STATE TOTAL   PURCHASE AMT: $4300   LEASE AMT: $145   # TERMINALS: 2   # MODEMS: 0

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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INSTALLED ADP EQUIPMENT LISTING

COLORADO   PAGE   1   5

EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION * * *	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
PRNTR TERMINAL	AJI	AJ630	2042	STATE OFFICE	LEASE	01/76	1	$ 3095	$ 140	234-2391
TELETYPE	TEL	28 ASR	97634	STATE OFFICE	LEASE	07/66	1	$ 0	$ 79	FIRE, CANT COM W-COMPUTR
TELETYPE	TEL	28 ASR	54259	CRAIG	LEASE	07/66	2	$ 0	$ 79	FIRE, CANT COM W-COMPUTR
TELETYPE	TEL	28 ASR	73569	MONTROSE	LEASE	37/66	1	$ 0	$ 79	FIRE, CANT COM W-COMPUTR
TELETYPE	TEL	28 ASR	NSN	CANON CITY	LEASE	07/66	1	$ 0	$ 79	FIRE, CANT COM W-COMPUTR
TELETYPE	TEL	28 ASR	101334	GRANDJUNCT	LEASE	07/66	1	$ 0	$ 79	FIRE, CANT COM W-COMPUTR
TELETYPE	TEL	33 ASR	NSN	GRANDJUNCT	LEASE	07/75	1	$ 0	$ 100	FIRE CONTROL

STATE TOTAL   PURCHASE AMT: $0   LEASE AMT: $635   # TERMINALS: 2   # MODEMS: 0

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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

IDAHO   PAGE   1

INSTALLED AOP EQUIPMENT LISTING

EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION * * *	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
TERMINAL	GEL	MARK 3		STATE OFFICE	LEASE		1	$0	$0	FIRE, CANT COM W-COMPUTR
TERMINAL W-PPT	HAZ	2000 CRT	29-23178	STATE OFFICE	LEASE	05/76	1	$0	$0	95
TTY	CFC	33 ASR	3119102	STATE OFFICE	LEASE		1	$0	$0	AFFIRMS
DATA CONVERTR	CFC	33 DATA	13379-B	STATE OFFICE	LEASE		1	$0	$0	AFFIRMS
TELETYPE	TEL	SC14		PURLEY	LEASE		1	$0	$0	VERY OLD
TELETYPE	TEL	SC14		IDAHOFALLS	LEASE		1	$0	$0	VERY OLD
TELETYPE	TEL	SC14		SALMON	LEASE		1	$0	$3	VERY OLD
TELETYPE	TEL	SC14		SHOSHONE C	LEASE		1	$0	$0	VERY OLD

STATE TOTAL   PURCHASE AMT: $0   LEASE AMT: $0   # TERMINALS: 3   # MODEMS: 1

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INSTALLED AOP EQUIPMENT LISTING

MONTANA   PAGE   1

EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION * * *	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
TELETYPE	TEL	28 ASR		FLO LOC 7 UNITS	LEASE		1	$ 0	$ 0	VERY OLD
TERMINAL	TEX	733 ASR	10041	STATE OFFICE	LEASE	08/74	1	$ 3645	$ 176	
TELEPRINTR	NEU	33 ASR		STATE OFFICE	LEASE	12/76	1	$ 0	$ 109	252-3801
TELETYPE	TEL	28 ASR		LEWISTOWN B	LEASE		4	$ 0	$ 75	FIRE, CANT COM N-COMPUTR

STATE TOTAL   PURCHASE AMT: $0   LEASE AMT: $360   # TERMINALS: 2   # MODEMS: 0

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INSTALLED ADP EQUIPMENT LISTING

NMEXICO   PAGE   1

EQUIPMENT TYPE	MFR TYPE-MODEL	SER NO.	LOCATION * * *	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
WORD PROCESSOR	LIO WDPR4316		NMEXICO	LEASE	09/77	1	$ 0	$ 474	95

	PURCHASE AMT:	$0		LEASE AMT:	$474	# TERMINALS:	0	# MODEMS:	0
STATE TOTAL									

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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INSTALLED ADP EQUIPMENT LISTING

PAGE   1   9

NEVADA

EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION * * *	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
IMPACT PRINTER	ALA	PRTPT300	19279	STATE OFFICE	LEASE	08/77	1	$ 0	$ 78	329-5000
DATA CONVERTR	CFC	33 MODEM		STATE OFFICE	LEASE	04/77	1	$ 0	$ 30	AFFIRMS
TTY	CFC	33 ASR	010745-1	STATE OFFICE	LEASE	04/77	1	$ 0	$ 60	AFFIRMS
EXECUPRT 3800A	CTI	EXE3800A	1460	STATE OFFICE	LEASE	08/77	1	$ 0	$ 137	8GX329

STATE TOTAL   PURCHASE AMT: $0   LEASE AMT: $305   # TERMINALS: 3   # MODEMS: 1

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INSTALLED ADP EQUIPMENT LISTING

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EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION ***	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
TERMINAL W-PRT	HAZ	2000 CRT		STATE OFFICE	LEASE		1	$ 0	$ 0	422-2476
TERMINAL	CFC	33 ASR		STATE OFFICE	LEASE		1	$ 0	$ 0	AFFIRMS
TERMINAL	CFC	35 ASR		STATE OFFICE	LEASE		1	$ 0	$ 0	FIRE CONTROL
DATA COM 33ASR	CFC	33 DATA	CONVERT	STATE OFFICE	LEASE		1	$ 0	$ 0	AFFIRMS
TERMINAL W-PRT	HAZ	2000 CRT	150209	LAKEVIEW	LEASE	04/77	1	$ 0	$ 181	96
TERMINAL	TEL	35 ASR		LAKEVIEW	LEASE		1	$ 0	$ 0	FIRE CONTROL
TERMINAL W-PRT	HAZ	2000 CRT	14334	BURNS	LEASE	04/76	1	$ 0	$ 181	96
TERMINAL	TEL	35 ASR	3668	BURNS	LEASE		1	$ 0	$ 0	FIRE CONTROL
TERMINAL W-PRT	HAZ	2000 CRT	16363	VALUELE	LEASE	04/76	1	$ 0	$ 181	96
TERMINAL	TEL	35 ASR		VALUELE	LEASE		1	$ 0	$ 0	FIRE CONTROL
TERMINAL W-PRT	HAZ	2000 CRT	17392	PRINEVILLE	LEASE		1	$ 0	$ 181	-6935
TERMINAL	TEL	35 ASR	1455	PRINEVILLE	LEASE		1	$ 0	$ 83	FIRE CONTROL
TERMINAL W-PRT	HAZ	2000 CRT		BAKER	LEASE	04/77	1	$ 0	$ 181	96
TERMINAL	TEL	35 ASR	3668	BAKER	LEASE		1	$ 0	$ 0	FIRE CONTROL
TERMINAL W-PRT	HAZ	2000 CRT	16174	SALEM	LEASE	04/77	1	$ 0	$ 181	422-5609
TTY SALEM	TEL	35 ASR		SALEM	LEASE		1	$ 0	$ 0	FIRE CONTROL
TTY SALM-TILMK	TEL	35 ASR		SALEM	LEASE		1	$ 0	$ 0	FIRE CONTROL
MINICOMPUTER	IBM	SYS 7	5012	EUGENE	LEASE		1	$ 0	$ 2315	96
GRAPH TERMINAL	TEK	4014		EUGENE	LEASE		1	$ 0	$ 0	95
HARD COPY UNIT	TEK	4610		EUGENE	LEASE		1	$ 0	$ 0	96
GRAPH TABLET	TEK	4054		EUGENE	LEASE		1	$ 0	$ 0	96
TERMINAL	TEL	35 ASR		ROSEBURG	LEASE		1	$ 0	$ 0	FIRE CONTROL
TERMINAL W-PRT	HAZ	2000 CRT	6598	MEDFORD	LEASE	04/77	1	$ 0	$ 181	FIRE CONTROL
TERMINAL	TEL	35 ASR		MEDFORD	LEASE		1	$ 0	$ 0	95
OATASPEED 40	WEL	OATASP40	16385	MEDFORD	LEASE	09/76	1	$ 0	$ 380	422-2476
TERMINAL	TEL	35 ASR		COOS BAY	LEASE		1	$ 0	$ 0	FIRE CONTROL

STATE TOTAL   PURCHASE AMT: $0   LEASE AMT: $4045   # TERMINALS: 22   # MODEMS: 1

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EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION	*	*	*	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
WD CPU SYS-6	IBM	CPU 6450	G100311	CEDAR CITY				LEASE	05/77	1	$ 0	$ 784	
WD CPU SYS-6	IBM	CPU 6450	0100737	RICHFIELD				LEASE	08/77	1	$ 0	$ 791	

STATE TOTAL   PURCHASE AMT: $0   LEASE AMT: $1575   # TERMINALS: 0   # MODEMS: 0

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EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
HD CPU SYS-32	IBM	C532C814		LEASE	09/77	1	$ 0	$ 1505	96
MODEM, HD PROC	IBM	MODM3872		LEASE	09/77	1	$ 0	$ 110	95
MAG CARD READR	IBM	P5321001		LEASE	09/77	1	$ 0	$ 255	95
HD CPU SYS-6	IBM	CPU 6430		LEASE	09/77	1	$ 0	$ 605	96
HD PROC SYS-6	IBM	PRT 664C		LEASE	09/77	1	$ 0	$ 685	96
HD CPU SYS-6	IBM	CPU 6430		LEASE	09/77	1	$ 0	$ 605	96
MODEM, HD PROC	IBM	MODM3872		LEASE	09/77	1	$ 0	$ 110	95
HD CPU SYS-6	IBM	CPU 6430		LEASE	09/77	1	$ 0	$ 605	96
MODEM, HD PROC	IBM	MODM3872		LEASE	09/77	1	$ 0	$ 110	96
HD CPU SYS-6	IBM	CPU 6430		LEASE	09/77	1	$ 0	$ 605	96
MODEM, HD PROC	IBM	MODM3972		LEASE	09/77	1	$ 0	$ 110	96

STATE TOTAL   PURCHASE AMT: $0   LEASE AMT: $5305   # TERMINALS: 0   # MODEMS: 0

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INSTALLED ADP EQUIPMENT LISTING

EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION * * *	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
TERMINAL	TEX	733 ASR	24743	DSC SSD	LEASE	09/75	1	$3675	$164	CPIS & MATH DEVELOPMENT
DIGITIZER	BEH	DATAGRID	7021-3	SPEC MAPPG	OWNED	05/74	1	$25166	$0	
DIGITIZER	DEL	403 MKII	033-255	SPEC MAPPG	OWNED	02/76	1	$19750	$0	
LOAN SMAP	IBM	26	49803	SPEC MAPPG	OWNED	02/71	1	$4475	$0	
	IBM	26	59703	SPEC MAPPG	OWNED	02/71	1	$4475	$0	
CD OUT DFOSTPL	UNI	KPCH1610	10901	SPEC MAPPG	LEASF	01/67	1	$0	$3	
	AJI	ADCC 242	6148	DSC ADP	OWNED	03/77	1	$100	$87	
AND JAC COUPL	AJI	COUPL232	15439	DSC ADP	OWNED	09/77	1	$195	$0	232-8805
AND JAC COUPL	AJI	COUPL232	26770	DSC ADP	OWNED	09/77	1	$195	$0	232-8802
OMPON PRINTER	ALA	PRTRLA36	13748	DSC ADP	LEASE	09/77	1	$0	$101	232-8805
OMPON PRINTER	ALA	PPTPLA36	13943	DSC ADP	LEASE	09/77	1	$0	$101	232-8802
OMPON PRINTER	ALA	PRTRLA36	13956	DSC ADP	LEASE	05/77	1	$0	$84	234-2267
	ALT	AC75DBCD	74894	DSC ADP	OWNED	09/74	1	$5465	$0	CRIS
	ALT	AC75MT1C	24115Y	DSC ADP	OWNED	09/74	1	$9250	$0	CRIS
LIBRARY CRT	BEE	OCLC 100	1960	DSC ADP	OWNED	10/77	1	$37000	$0	GD178814
B-5500 SYSTEM	BUR	871	NSN	DSC ADP	OWNED	11/73	1	$1219	$0	
B-5500 SYSTEM	BUR	872	NSN	DSC ADP	OWNED	11/73	1	$1219	$0	
B-5500 SYSTEM	BUR	475	15032	DSC ADP	OWNED	11/73	1	$12070	$0	
B-5500 SYSTEM	BUR	471	15613	DSC ADP	OWNED	11/73	1	$8655	$0	
B-5500 SYSTEM	BUR	475	24181	DSC ADP	OWNED	11/73	1	$12070	$0	
B-5500 SYSTEM	BUR	R871	3871A	DSC ADP	OWNED	10/67	1	$2850	$60	
B-5500 SYSTEM	BUR	R971	38718	DSC ADP	OWNED	10/67	1	$2800	$60	
B-5500 SYSTEM	BUR	B872	3872A	DSC ADP	OWNED	10/67	1	$2800	$60	
B-5500 SYSTEM	BUR	B872	38723	DSC ADP	OWNED	10/67	1	$2800	$60	
B-5500 SYSTEM	BUR	475	41643	DSC ADP	OWNED	11/73	1	$12070	$0	
B-5500 SYSTEM	BUR	451	49777	DSC ADP	OWNED	11/73	1	$2438	$0	
B-5500 SYSTEM	BUR	475	82448E	DSC ADP	OWNED	04/76	1	$12070	$0	
B-5500 SYSTEM	BUR	83047609	854980	DSC ADP	OWNED	10/67	1	$18100	$0	
B-5500 SYSTEM	BUR	85470	35470A	DSC ADP	OWNED	10/67	1	$16500	$0	
B-5500 SYSTEM	BUR	475	811028E	DSC ADP	OWNED	04/76	1	$12070	$0	
B-5500 SYSTEM	BUR	B5283	8139B4E	DSC ADP	OWNED	04/76	1	$14053	$0	
B-5500 SYSTEM	BUR	475	8142468E	DSC ADP	OWNED	04/76	1	$12070	$0	
B-5500 SYSTEM	BUR	B475	8178577E	DSC ADP	OWNED	04/76	1	$12070	$0	
B-5500 SYSTEM	BUR	475	8195816E	DSC ADP	OWNED	10/67	1	$23700	$0	
B-5500 SYSTEM	BUR	B425	8211346E	DSC ADP	OWNED	10/67	1	$12070	$0	
B-5500 SYSTEM	BUR	B471	8227035E	DSC ADP	OWNED	10/67	1	$19890	$0	
B-5500 SYSTEM	BUR	B475	8228006E	DSC ADP	OWNED	04/76	1	$12070	$0	
B-5500 SYSTEM	BUR	B425	8239818E	DSC ADP	OWNED	10/67	1	$23700	$0	
B-5500 SYSTEM	BUR	B461	9239919E	DSC ADP	OWNED	10/67	1	$37300	$0	
B-5500 SYSTEM	BUR	B461	8233203E	DSC ADP	OWNED	10/67	1	$37300	$0	
B-5500 SYSTEM	BUR	B461	8239921E	DSC ADP	OWNED	10/67	1	$37300	$0	
B-5500 SYSTEM	BUR	B461	8239233E	DSC ADP	OWNED	10/67	1	$37300	$0	
B-5500 SYSTEM	BUR	B461	8239924E	DSC ADP	OWNED	10/67	1	$37300	$0	
B-5500 SYSTEM	BUR	B461	8239325E	DSC ADP	OWNED	10/67	1	$37300	$0	
B-5500 SYSTEM	BUR	B461	8239931E	DSC ADP	OWNED	10/67	1	$37300	$0	
B-5500 SYSTEM	BUR	B461	8239926E	DSC ADP	OWNED	10/67	1	$37300	$0	
B-5500 SYSTEM	BUR	B5285	8240045E	DSC ADP	OWNED	10/67	1	$19040	$0	
B-5500 SYSTEM	BUR	B5283	8241146E	DSC ADP	OWNED	10/67	1	$32200	$0	
B-5500 SYSTEM	BUR	B425	8243206E	DSC ADP	OWNED	10/67	1	$23700	$0	
B-5500 SYSTEM	BUR	B425	8243233E	DSC ADP	OWNED	10/67	1	$23700	$0	

INSTALLED ADP EQUIPMENT LISTING

EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION * * *	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
B-5500 SYSTEM	BUR	B475	B42269E	OSC ADP	OWNED	04/76	1	$ 12070	$ 0	
B-5500 SYSTEM	BUR	B425	B4737AE	OSC ADP	OWNED	04/76	1	$ 23700	$ 0	
B-5500 SYSTEM	BUR	B425	B51540E	OSC ADP	OWNED	10/67	1	$ 23700	$ 0	
B-5500 SYSTEM	BUR	B475	B101286E	OSC ADP	OWNED	04/76	1	$ 12070	$ 0	
B-5500 SYSTEM	BUR	B450	B113348E	OSC ADP	OWNED	10/57	1	$ 7100	$ 0	
B-5500 SYSTEM	BUR	B124	B3119200	OSC ADP	OWNED	04/76	1	$ 16700	$ 0	
B-5500 PRINTER	BUR	9243-11	75005504	OSC ADP	OWNED	08/77	1	$ 0	$ 940	
B-5500 PRINTER	BUR	9243-11	75005604	OSC ADP	LEASE	08/77	1	$ 0	$ 940	
BELL 2C2S MODM	BTC	MODEM202	232-3490	OSC ADP	LEASE	08/77	1	$ 0	$ 330	232-3490
BELL 2C2S MODM	BTC	MODEM202	232-3491	OSC ADP	LEASE	08/77	1	$ 0	$ 330	232-3491
BELL 2C2S MODM	BTC	MODEM202	232-3493	OSC ADP	LEASE	08/77	1	$ 0	$ 330	232-3493
BELL 208 MODM	BTC	MODEM208	232-5857	OSC ADP	LEASE	07/77	1	$ 0	$ 1350	232-5857
7BELL 203 MODM	BTC	MODEM208	232-5858	OSC ADP	LEASE	07/77	0	$ 0	$ 1350	PJ (H GI- D" A BA5
KEY ENTRY SYS	CMC	PRT 762	9T1C3	OSC ADP	LEASE	05/72	1	$ 5000	$ 500	
KEY ENTRY SYS	CMC	KSRF1171	A700J187	OSC ADP	LEASE	01/76	1	$ 2000	$ 53	
KEY ENTRY SYS	CMC	KSP11172	AN0J188	OSC ADP	LEASE	01/76	1	$ 2000	$ 53	
KEY ENTRY SYS	CMC	MM9K1061	EH00073	OSC ADP	LEASE	01/76	1	$ 1000C	$ 109	
KEY ENTRY SYS	CMC	MI8K1062	EI00114	OSC ADP	LEASE	01/76	1	$ 2000	$ 53	
KEY ENTRY SYS	CMC	MI9K1062	EI00115	OSC ADP	LEASE	01/76	1	$ 2000	$ 53	
KEY ENTRY SYS	CMC	MI8K1062	EI00116	OSC ADP	LEASE	01/76	1	$ 2000	$ 53	
KEY ENTRY SYS	CMC	PR641055	EK00112	OSC ADP	LEASE	01/76	1	$ 9000	$ 185	
KEY ENTRY SYS	CMC	KSMX1131	EL00116	OSC ADP	LEASE	01/76	1	$ 4000	$ 53	
KEY ENTRY SYS	CMC	MLTT1132	EM00107	OSC ADP	LEASE	01/76	1	$ 2000	$ 53	
KEY ENTRY SYS	CMC	MI251222	ES00133	OSC ADP	LEASE	01/76	1	$ 4000	$ 100	
KEY ENTRY SYS	CMC	MI251222	ES00134	OSC ADP	LEASE	01/76	1	$ 4000	$ 100	
KEY ENTRY SYS	CMC	MI251222	ES00135	OSC ADP	LEASE	01/76	1	$ 4000	$ 100	
KEY ENTRY SYS	CMC	MI251222	ES00136	OSC ADP	LEASE	01/76	1	$ 4030	$ 132	
KEY ENTRY SYS	CMC	FCTL1786	MH00174	OSC ADP	LEASE	01/76	1	$ 5000	$ 370	
KEY ENTRY SYS	CMC	PRT1791	MY00156	OSC ADP	LEASE	01/76	1	$ 14000	$ 585	
KEY ENTRY SYS	CMC	PRT1792	NX01113	OSC ADP	LEASE	06/77	1	$ 21000	$ 106	
KEY ENTRY SYS	CMC	USEF1935	W?00140	OSC ADP	LEASE	01/76	1	$ 4000	$ 53	
KEY ENTRY SYS	CMC	OA4T2939	MY00166	OSC ADP	LEASE	01/76	1	$ 2000	$ 53	
KEY ENTRY SYS	CMC	MCF1943	W7000151	OSC ADP	LEASE	01/76	1	$ 2000	$ 50	
KEY ENTRY SYS	CMC	KSTN 137	X900057	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X900079	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X900092	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X900083	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 137	X900097	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X900105	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X900110	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X900116	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X900117	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X900119	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X900123	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X900125	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X900129	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X900134	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 137	X900137	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 137	X900140	OSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X900144	OSC ADP	LEASE	01/76	1	$ 1430	$ 50	

INSTALLED ADP EQUIPMENT LISTING

EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION * * *	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
KEY ENTRY SYS	CMC	KSTN 107	X901166	DSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	XR00171	DSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X901193	DSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 107	X900192	DSC ADP	LEASE	01/76	1	$ 1400	$ 50	
KEY ENTRY SYS	CMC	KSTN 108	XC027753	DSC ADP	LEASE	01/76	1	$ 2800	$ 74	
KEY ENTRY SYS	CMC	KSTN 108	XC027754	DSC ADP	LEASE	01/76	1	$ 2800	$ 74	
KEY ENTRY SYS	CMC	KSTN 108	XC027755	DSC ADP	LEASE	01/76	1	$ 2800	$ 74	
KEY ENTRY SYS	CMC	KSTN 108	XC027325	DSC ADP	LEASE	01/76	1	$ 2800	$ 74	
KEY ENTRY SYS	CMC	CCON116	XD00200	DSC ADP	LEASE	01/76	1	$ 4000	$ 106	
KEY ENTRY SYS	CMC	MTU71307	XF00115	DSC ADP	LEASE	01/76	1	$ 12000	$ 317	
KEY ENTRY SYS	CMC	TCTL1343	XMC0202	DSC ADP	LEASE	01/76	1	$ 2000	$ 53	
KEY ENTRY SYS	CMC	DCTL1251	XY901116	DSC ADP	LEASE	01/76	1	$ 2000	$ 106	
KEY ENTRY SYS	CMC	PPG21930	X709132	DSC ADP	LEASE	01/76	1	$ 4000	$ 185	
KEY ENTRY SYS	CMC	SCON1018	YA0C213	DSC ADP	LEASE	01/76	1	$ 9000	$ 106	
KEY ENTRY SYS	CMC	MD251221	Y700112	DSC ADP	LEASE	01/76	1	$ 18000	$ 149	
EXECUPRT 3830A	CTI	EXE3830A	2058	DSC ADP	LEASE	06/77	1	$ 0	$ 149	234-2267
EXECUPRT 3830A	CTI	EXE3830A	22221	DSC ADP	LEASE	08/77	1	$ 0	$ 149	234-2267
EXECUPRT 3830A	CTI	EXE3830A	22232	DSC ADP	LEASE	08/77	1	$ 0	$ 110	234-2267
EXECUPORT 325C	CTI	EXEC325C	52817	DSC ADP	LEASE	09/77	1	$ 0	$ 110	234-2267
EXECUPORT 325C	CTI	EXEC325C	52819	DSC ADP	LEASE	09/77	1	$ 0	$ 117	232-5838
DATAPOINT PRTR	DPE	PRTR1100	30	DSC ADP	LEASE	09/77	1	$ 0	$ 738	234-5299
DATAPOINT TAPE	DPE	TAPE1100	483	DSC ADP	LEASE	10/76	1	$ 0	$ 295	234-5299
DATAPOINT CRDR	DPE	CRDR1100	7412097	DSC ADP	LEASE	10/76	1	$ 0	$ 160	234-5299
DATAPOINT 1100	DPE	9392-001	1110-132	DSC ADP	LEASE	10/76	1	$ 0	$ 309	234-5299
VENTELL COUPL	DSM	COUPL133	2595	DSC ADP	OWNED	01/77	1	$ 225	$ 0	234-2267
VENTELL COUPL	DSM	COUPL133	2682	DSC ADP	OWNED	01/77	1	$ 225	$ 0	234-2267
VENTELL COUPL	DSM	COUPL103	2913	DSC ADP	OWNED	09/77	1	$ 225	$ 0	234-2267
VENTELL COUPL	DSM	COUPL103	2932	DSC ADP	OWNED	06/77	1	$ 225	$ 0	234-2267
VENTELL COUPL	DSM	COUPL103	3051	DSC ADP	OWNED	07/77	1	$ 225	$ 0	234-2267
VENTELL COUPL	DSM	COUPL103	3052	DSC ADP	OWNED	07/77	1	$ 225	$ 0	234-2267
VENTELL COUPL	DSM	COUPL103	3155	DSC ADP	OWNED	09/77	1	$ 225	$ 0	234-2267
VENTELL COUPL	DSM	COUPL103	3198	DSC ADP	OWNED	10/77	1	$ 225	$ 0	234-2267
VENTELL COUPL	DSM	COUPL103	3199	DSC ADP	OWNED	10/77	1	$ 225	$ 0	234-2267
VENTELL COUPL	DSM	COUPL103	3202	DSC ADP	OWNED	10/77	1	$ 225	$ 0	234-2267
VENTELL COUPL	DSM	COUPL103	3203	DSC ADP	OWNED	10/77	1	$ 225	$ 0	234-2267
VENTELL COUPL	DSM	COUPL103	3204	DSC ADP	OWNED	10/77	1	$ 225	$ 0	234-2267
VENTELL COUPL	DSM	COUPL103	3205	DSC ADP	OWNED	10/77	1	$ 225	$ 0	234-2267
VENTELL COUPL	DSM	COUPL103	3206	DSC ADP	OWNED	10/77	1	$ 225	$ 0	234-2267
VENTELL COUPL	DSM	COUPL103	3207	DSC ADP	OWNED	10/77	1	$ 225	$ 0	234-2267
HAZ2000 PRTR	HAZ	PRNTR752	1500	DSC ADP	LEASE	03/73	1	$ 0	$ 83	
TERMINAL	HAZ	2000 CRT	15233-2	DSC ADP	OWNED	03/73	1	$ 634	$ 0	
	IBM	59 2	84733	SPEC MAPPG	LEASE	07/73	1	$ 3660	$ 86	
	IBM	26	M9236	DSC ADP	LEASE	07/73	1	$ 0	$ 98	
	IBM	29 922	57001	DSC ADP	LEASE	07/73	1	$ 4120	$ 90	
	IBM	129 3	57736	DSC ADP	LEASE	07/73	1	$ 6125	$ 153	
	IBM	26	77954	DSC ADP	LEASE	07/73	1	$ 4700	$ 55	
	IBM	26	85346	DSC ADP	LEASE	07/73	1	$ 6125	$ 55	
	IBM	129 3	93735	DSC ADP	LEASE	07/73	1	$ 4700	$ 150	
	IBM	26	98777	DSC ADP	LEASE	01/73	1	$ 330	$ 55	
	OMI	702A	18	DSC ADP	OWNED	01/73	1	$ 330	$ 0	
	OMI	701B	2099	DSC ADP	OWNED	06/75	1	$ 275	$ 0	CRIS

DENVR SC

EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION * * *	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
OMRON W-80AC	ORI	8030BCRT	6386	DSC ADP	LEASE	05/77	1	$ 2175	$ 121	2267
OMRON W-8C80	ORI	8030BCRT	6171	DSC ADP	LEASE	12/76	1	$ 2175	$ 121	2269
OMRON W-808C	OPI	8030BCPT	6105	DSC ADP	LEASE	05/77	1	$ 2175	$ 121	2269
OMRON W-80AO	OPI	8030CBCRT	6169	DSC ADP	LEASE	05/77	1	$ 2175	$ 121	2269
OMRON W-80AC	ORI	8030DCRT	6175	DSC ADP	LEASE	08/77	1	$ 2175	$ 121	2269
OMRON W-808C	ORI	8030BCRT	6359	DSC ADP	LEASE	08/77	1	$ 2175	$ 121	2269
ADM-3 CRT TERM	LSI	CRTADM-3	7405	DSC ADP	LEASE	09/77	1	$ 0	$ 63	2269
ADM-3 CRT TERM	LSI	CRTADM-3	7415	DSC ADP	LEASE	09/77	1	$ 0	$ 63	2269
ADM-3 CRT TERM	LSI	CRTADM-3	7537	DSC ADP	LEASE	09/77	1	$ 0	$ 63	2269
ADM-3 CRT TERM	LSI	CRTADM-3	7687	DSC ADP	LFASE	09/77	1	$ 0	$ 63	2269
ADM-3 CRT TERM	LSI	CRTADM-3	7758	DSC ADP	LEASE	09/77	1	$ 0	$ 63	2269
ADM-3 CRT TERM	LSI	CRTADM-3	7800	DSC ADP	LEASE	09/77	1	$ 0	$ 63	2269
ADM-3 CRT TERM	LSI	CRTADM-3	7850	DSC ADP	LEASE	09/77	1	$ 0	$ 63	2269
ADM-3 CRT TERM	LSI	CRTADM-3	7913	DSC ADP	LEASE	09/77	1	$ 0	$ 63	2269
TRENDATA PRT	TDC	PRTP4000	K2058	DSC ADP	LEASE	08/77	1	$ 0	$ 176	234-2267
TERMINAL	TEK	4014 1	8031572	DSC ADP	OWNED	10/75	1	$ 10745	$ 5	CRIS
TERMINAL	TEK	4631	8041331	DSC ADP	OWNED	10/75	1	$ 3895	$ 5	CRIS
TERMINAL	TEX	735	2581	DSC ADP	OWNED	05/75	1	$ 432	$ 0	CRIS
TERMINAL	TEX	735	3450	DSC ADP	OWNED	05/75	1	$ 1009	$ 0	CRIS
RECEIVE ONLY	TEX	733 ASR	17430	DSC ADP	OWNED	01/73	1	$ 631	$ 0	CRIS
TERMINAL	TEY	735	3451	ADP HARDWR	LEASE	09/77	1	$ 0	$ 198	
EXECUPRT 3800	CTI	EXE3800	2135	DSC S&T	OWNED	05/75	1	$ 1009	$ 0	CPIS
TERMINAL	TEX	735	3449	DSC S&T	LEASE	07/77	1	$ 0	$ 149	234-2267
ELL MODEM	BTC	208-B	1130	DSC S&T	OWNED	05/75	1	$ 1039	$ 0	COAL LEASE
CALCOMP TAPUNT	CAL	TAPE 925	3124	ENGINEERNG	LEASE	11/76	10	$ 0	$ 135	48
CALCOMP PLOTTR	CAL	PLOT4036	67976	ENGINEERNG	OWNED	11/76	1	$ 27099	$ 1110	
MEMORY CTRLR	DTA	CTRL8121	2313	ENGINEERNG	OWNED	11/76	1	$ 22895	$ 968	
TAPE & CTRLR	DTA	TAPE8202	C374	ENGINEERNG	OWNED	11/76	2	$ 3024	$ 50	
TAPE TRANSPRT	DTA	TAPE8202	374	ENGINEERNG	OWNED	11/76	1	$ 6426	$ 159	
SYNC COM-CTRLR	DTA	COM78702	C2303	ENGINEERNG	OWNED	11/76	1	$ 5859	$ 159	
PRINTR-CTLR	DTA	PRT78405	355	ENGINEERNG	OWNED	11/76	1	$ 3212	$ 74	
CRT OPER SYNC	DTA	CRTC8719	208	ENGINEERNG	OWNED	11/76	1	$ 19618	$ 538	
CD PUNCH-CTLR	DTA	PCH78302	1030	ENGINEERNG	OWNED	11/76	1	$ 2268	$ 76	
DATA-2CC CPU	DTA	CPU78113	2313	ENGINEERNG	OWNED	11/76	1	$ 9261	$ 246	
CD RDR-CTLP	DTA	RDR78303	139	ENGINEERNG	OWNED	11/76	1	$ 12663	$ 395	6411
KEYPUNCH	IBM	KPCH 029	H1686	ENGINEERNG	OWNED	11/76	1	$ 5746	$ 162	
TPENDATA PRT	ICC	2250 20	A25267	ENGINEERNG	LEASE	07/77	1	$ 0	$ 124	
	TDC	PRTR4000	K1594	ENGINEERNG	OWNED	12/72	1	$ 0	$ 5	ENGINEERING
				ENGINEERNG	OWNED	06/77	1	$ 5102	$ 0	234-5360

STATE TOTAL   PURCHASE AMT: $1190147   LEASE AMT: $16299   # TERMINALS: 35   # MODEMS: 19

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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INSTALLED ADP EQUIPMENT LISTING

BIFC   PAGE   1

EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION * * *	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
TTY	CFC	33 ASR	90-25337	BIFC	LEASE		1	$ 0	$ 0	AFFIRMS
DATA CONVERTR	CFC	33 DATA	CONVERT	BIFC	LEASE		1	$ 0	$ 0	AFFIRMS
FOR 3741 STA	IBM	PRTR3715	13541	BIFC	LEASE	05/75	1	$ 0	$ 113	
PROGRAMBLE STA	IBM	BKST3741	13799	BIFC	LEASE	/	1	$ 0	$ 506	

STATE TOTAL   PURCHASE AMT: $0   LEASE AMT: $619   # TERMINALS: 1   # MODEMS: 1

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INSTALLED ADP EQUIPMENT LISTING

EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION * * *	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
	IBM	129	58020	EASTERN ST	LEASE	07/73	1	$ 6125	$ 150	
	IBM	129	80985	EASTERN ST	LEASE	07/73	1	$ 6125	$ 150	
	IBM	129	83986	EASTERN ST	LEASE	07/73	1	$ 6125	$ 150	

STATE TOTAL   PURCHASE AMT: $0   LEASE AMT: $450   # TERMINALS: 0   # MODEMS: 0

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GULF OCS

EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION * * *	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
CRT TERMINAL	TEK	4051	43260	GULF OCS	LEASE	10/76	1	$ 0	$ 0	OASIS
PPT TERMINAL	TEX	TI-745	2745	GULF OCS	LEASE	10/76	1	$ 0	$ 0	OASIS

STATE TOTAL	PURCHASE AMT:	$0	LEASE AMT:	$0	# TERMINALS:	2	# MODEMS:	0

EQUIPMENT TYPE	MFR	TYPE-MODEL	SER NO.	LOCATION * *	OWNER	INSTALLED	QTY	PUR-PRICE	MO-RENTAL	DESCRIP-CHAR-CIRCUIT NO
CRT TERMINAL	TEK	4051	54021	LA OCS	LEASE	10/76	1	$ 0	$ 0	OASIS

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